

REMARKS

Pending Claims

Claims 6 and 15 have been canceled. Claims 1-3, 5, 9-12, 14 and 18-20 remain pending. Claims 1, 10 and 19 have been amended.

Amendments to the Drawings

The drawings are objected to under 37 CFR 1.83(a) for not showing every feature of the invention specified in the claims in that they do not show "a combustor outer cylinder mounted outside the outer casing" as recited in claims 1, 10 and 19. These claims have now been amended to recite "a combustor outer cylinder mounted to the casing." As the Examiner noted on page 4 of the Action "the drawing (Fig. 1, A) shows that the combustor cylinder 8 is mounted to the casing 7,..." It is therefore believed that no amendments to the drawings are now necessary.

Claim Rejections Under 35 USC §112

Claims 1, 10 and 19 are rejected under 35 USC 112, first paragraph, as failing to comply with the written description requirement. As noted above claims 1, 10 and 19 have been amended so that they now comply with 35 USC 112, first paragraph.

Claims 1-3, 5-6, 9-12, 14-15 and 18-20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention for the reasons set forth on pages 4 and 5 of the action. The claims have been amended so that they now comply with 35 USC 112, second paragraph.

Claims Rejections Under 35 USC §102 and 35 USC §103(a)

Claims 1-3, 5, 9-12, 14 and 18-20 are rejected under 35 USC 102(b) as being anticipated by Corrado, U.S. Patent No. 5,280,703.

Claims 6 and 15 are rejected under 35 U.S.C. 103(a) as being unpatentable over Corrado in view of Noe, U.S. Publication No. 2003/0031555.

For the reasons set forth hereafter, it is submitted that the claims, as amended, are patentable.

Patentability of the Claims

By this amendment, claims 1, 10 and 19 have been amended to define the combustor outer cylinder as being mounted to the casing. Claims 1 and 10 have also been amended to define a casing which covers all of a scroll, a shell and a diffuser while leaving a space therebetween, the diffuser connecting with the shell and the scroll being mounted inside the outer casing to form a first part of a combustion gas flow path for guiding a combustion gas generated in a combustor to a nozzle which injects the combustion gas to a radial impeller on an inner side in a radial direction of a rotary shaft. The shell has further been defined as covering the nozzle and the impeller and forming a second part of the combustion flow path.

Claims 1 and 10 have further been amended to add the limitations of claims 6 and 15, respectively, so that both of these claims now recite that the nozzle includes a circular blade cascade in which a number of blades are arranged in a row in a circumference thereof and of which a center is a turbine rotary shaft, and the through

holes extending through the shell include a plurality of through holes along a surface of each blade of the circular blade cascade.

The amendments to claims 1 and 10 make it quite clear that the casing is configured to cover all of the scroll, the shell and the diffuser while leaving a space between the casing and the scroll, the shell and the diffuser so as to form a compressed air flow path in the space. See paragraph 0017 of the publication of the present application which is 2008-0092515. With this configuration, it becomes possible to cool the scroll, the diffuser and the like without any unevenness of the temperature distribution, thus obtaining a cooling affect while inhibiting the occurrence of heat deformation of any of the parts.

In contrast, the Corrado '703 patent does not disclose a casing which covers a scroll, a shell and diffuser. Attached as page A-1 is a copy of the figure of Corrado annotated to show various parts and the path of the compressed air A and B. As seen from the drawing, the casing is on the right hand side and it does not cover all of the scroll, the shell and the diffuser. Moreover, Corrado discloses a configuration wherein the combustor inner cylinder and one side of the nozzle are cooled by the compressed air A with increased air temperature and the other side of the nozzle is cooled by the compressed air B which does not pass through the combustor. Thus, with this configuration of Corrado, there is a difference in temperature between the compressed air A and the compressed air B. Accordingly, both sides of the nozzle are cooled by the compressed air A and the compressed air B having different temperatures, respectively. This causes an unevenness of the temperature distribution between the front and rear of the nozzle and this unevenness of temperature distribution promotes heat deformation of the parts.

It is further noted that in line 3 on page 7 of the Action, the Examiner refers to "an air take-in hole 12 (Fig. 1)." The numeral 12 of Corrado, however, does not refer to an air take-in hole but rather a blade of the compressor.

In contrast to the Corrado patent, the present invention makes it possible to inject incoming air having the same temperature from both the left and right hand sides of the nozzle and to therefore suppress generation of thermal stress.

Accordingly, it is submitted that Applicants' invention, as now claimed, patentably distinguishes over the cited Corrado reference.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants contend that the above-identified application is now in condition for allowance. Accordingly, reconsideration and reexamination are respectfully requested.

To the extent necessary, Applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, or credit any overpayment of fees, to the deposit account of Mattingly & Malur, P.C., Deposit Account No. 50-1417 (referencing attorney docket no. ASA-5487).

Respectfully submitted,

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